

# United States Patent

Rupert et al.

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## [54] THIN FILM PLANAR RESISTOR

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## [57] ABSTRACT

A planar film circuit in which a metallic oxide planar film is on a dielectric substrate, said planar film having areas of insulation comprising said metallic oxide, and areas of conduction comprising reduced metal. The planar film surface is not altered by the presence of said insulating and conducting areas. The method for forming said metallic oxide planar film circuits provides depositing said metallic oxide by reactive sputtering of a metal under vacuum in the presence of oxygen, and selectively reducing areas of said metallic oxide with hydrogen and an energy source. The method is used to obtain planar film electrical circuits having resistor and capacitor elements.

2 Claims, 5 Drawing Figures

